

Notice of Allowability	Application No.	Applicant(s)	
	09/942,388	CZERWIEC ET AL.	
	Examiner	Art Unit	
	Binh Q. Nguyen	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/11/2005.
2. ☒ The allowed claim(s) is/are 1-32, and 35-37 as renumbering 1-35 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>09/08/2005</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Attorney Francis J. Maguire, Reg. No. 31,391 on November 30, 2005.
3. The application has been amended as follows:
Claims 33, and 34 are canceled.

REASONS FOR ALLOWANCE

4. Claims 1-32, and 35-37 allowed.
5. The following is an examiner's statement of reasons for allowance: the prior art made of record does not teach in combination of other limitations recited in claim 1;
a plurality of shelves, at least one shelf for connection to said upstream network service provider by means of network termination equipment, each shelf for connection to different equipment of said downstream subscriber equipment by means of line termination equipment, wherein each of said plurality of shelves has a same nonredundant feature;
at least one pair of redundant line termination equipment, one line termination equipment of said pair for use in said at least one shelf in association with said same nonredundant feature

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thereof and a remaining line termination equipment of said pair for use in another shelf of said plurality of shelves in association with said same nonredundant feature thereof; and

means for connecting said at least one shelf and said another shelf for providing said same nonredundant feature redundantly.

The prior art made of record does not tech in combination of other limitations recited in claim 3;

a hub (90), including network termination equipment (NT) for connection to said upstream network service provider and including line termination equipment (14a, . . . , 92, 94) connected to said network termination equipment for connection to different equipment of said downstream subscriber equipment; and

at least one remote device (96, 98) connected to a line termination equipment (92, 94) of said hub, said remote device including network termination equipment for connection to said line termination equipment of said hub, and also for connection to line termination equipment (ADSL LT) of said remote device, wherein said line termination equipment of said remote device is for connection to said subscriber equipment by a plurality of twisted pairs.

The prior art made of record does not tech in combination of other limitations recited in claim 12;

a plurality of shelves, at least one shelf for connection to said upstream network service provider by means of network termination equipment, each shelf for connection to different equipment of said downstream subscriber equipment by means of line termination equipment, wherein each of said plurality of shelves has a same nonredundant shelf bus for interconnecting said network termination equipment and said line termination equipment; and

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a plurality of extender cards for use in all of said plurality of shelves, except one shelf in which said network termination equipment is used, wherein said extender cards substitute for said network termination equipment in each of said shelves except said one shelf having said network termination equipment, wherein said network termination equipment in said one shelf interconnects all of said line termination equipment in said rack to said upstream network service provider.

The prior art made of record does not tech in combination of other limitations recited in claim 13;

a telecommunications shelf for mounting in a telecommunications rack of a telecommunications system for providing network services from an upstream network service provider to downstream subscriber equipment, said shelf comprising:

- network termination equipment, for connection to said upstream network service provider;
- a backplane bus;

only one of pair of redundant line termination equipment for connection to said network termination equipment via said backplane bus and for connection to said downstream subscriber equipment, another one of said pair of redundant line termination equipment for connection to said subscriber equipment from within another shelf mounted in said rack.

The prior art made of record does not tech in combination of other limitations recited in claim 14;

a plurality of telecommunication racks, each rack capable of housing a plurality of shelves, at least one shelf of one rack for connection to an upstream broadband network service provider by means of network termination equipment, each shelf for housing line termination equipment

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for connecting plural twisted copper pairs to subscriber equipment at corresponding plural subscriber premises for delivery of broadband services, wherein said line termination equipment occupies a space six rack spaces in height for containing up to twelve line termination cards in a central portion of said shelf, and wherein said network termination equipment includes at least one network termination card also occupying six rack spaces in height adjacent said line termination equipment but at an end of said shelf.

The prior art made of record does not tech in combination of other limitations recited in claim 30;

a central office (100) including an asynchronous transfer mode (ATM) switch (104) connected to an ATM network (108), a central office switch (102) connected to a public switched telephone network (106) and a hub (90) connected to both said ATM switch and to said central office switch;

subscriber equipment located at separate customer premises 118, each including both a digital subscriber line (DSL) modem (126) and a plain old telephone service (POTS) terminal (124) connected to said hub by a corresponding twisted copper pair, wherein both POTS and DSL services are provided on a plurality of separate twisted copper pairs to said separate customer premises.

The prior art made of record does not tech in combination of other limitations recited in claim 35;

a plurality of line termination cards connected to said backplane bus as well as to a plurality of lowpass filter cards also connected to said backplane bus and to customer premises equipment for providing both said broadband services via said line termination cards and said

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narrowband services via said lowpass filter cards, wherein said lowpass filter cards are connected to a central office and wherein said line termination cards are connected to a broadband network via said backplane bus and via said network termination card.


Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh Q. Nguyen whose telephone number is 571-272-8563. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

By: 
Binh Q. Nguyen
Patent Examiner
11/30/2005


WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER